oned the whole length of the Colours not to be the whole length of the Spectrum, but the length of its rectilinear sides, so completing the Semicirlar Ends into Circles, when either of the observed Colours fell within those Circles, I measured the distance of that Colour from the End of the Spectrum, and subducting half the distance from the measured distance of the Colours, I took the remainder for their corrected distance; and in these Observations set down this corrected distance for the difference of their distances from the Lens. For as the length of the rectilinear sides of the Spectrum would be the whole length of all the Colours, were the Circles of which (as we shewed) that Spectrum consists contracted and reduced to Physical Points, so in that Case this corrected distance would be the real distance of the observed Colours.

When therefore I further observed the deepest sensible Red, and that Blue whose corrected distance from it was $\frac{7}{12}$ parts of the length of the rectilinear sides of the Spectrum, the difference of the distances of their Foci from the Lens was about $3\frac{1}{4}$ Inches, and as 7 to 12 so is $3\frac{1}{4}$ to $5\frac{4}{7}$.

When I observed the deepest sensible Red, and that Indigo whose corrected distance was $\frac{8}{12}$ or $\frac{2}{3}$ of the length of the rectilinear sides of the Spectrum, the difference of the distances of their Foci from the Lens, was about $3\frac{2}{3}$ Inches, and as 2 to 3 so is $3\frac{2}{3}$ to $5\frac{1}{2}$.

When I observed the deepest sensible Red, and that deep Indigo whose corrected distance from one another was $\frac{9}{12}$ or $\frac{3}{4}$ of the length of the rectilinear sides of the Spectum, the difference of the distances of their Foci from the Lens was about 4 Inches; and as 3 to 4 so is 4 to $5\frac{1}{3}$.

When I observed the deepest sensible Red, and that part of the Violet next the Indigo whose corrected distance from the Red was $\frac{10}{12}$ or $\frac{5}{6}$ of the length of the rectilinear sides of the

the Spectrum, the difference of the distances of their Foci from the Lens was about $4\frac{1}{2}$ Inches; and as 5 to 6, so is $4\frac{1}{2}$ to $5\frac{2}{5}$. For sometimes when the Lens was advantagiously placed, so that its Axis respected the Blue, and all things else were well ordered, and the Sun shone clear, and I held my Eye very near to the Paper on which the Lens cast the Species of the Lines, I could see pretty distinctly the Species of those Lines by that part of the Violet which was next the Indigo; and sometimes I could see them by above half the Violet. For in making these Experiments I had observed, that the Species of those Colours only appeared distinct which were in or near the Axis of the Lens: So that if the Blue or Indigo were in the Axis, I could see their Species distinctly; and then the Red appeared much less distinct than before. Wherefore I contrived to make the Spectrum of Colours shorter than before, so that both its Ends might be nearer to the Axis of the Lens. And now its length was about $2\frac{1}{2}$ Inches and breadth about $\frac{1}{5}$ or $\frac{1}{6}$ of an Inch. Also instead of the black Lines on which the Spectrum was cast, I made one black Line broader than those, that I might see its Species more easily; and this Line I divided by short cross Lines into equal Parts, for measuring the distances of the observed Colours. And now I could sometimes see the Species of this Line with its divisions almost as far as the Centers of the Semicircular Violet End of the Spectrum, and made these further Observations.

When I observed the deepest sensible Red, and that part of the Violet whose corrected distance from it was about $\frac{8}{9}$ Parts of the rectilinear sides of the Spectrum the difference of the distances of the Foci of those Colours from the Lens, was one time $4\frac{2}{3}$, another time $4\frac{3}{4}$, another time $4\frac{7}{8}$, Inches, and as 8 to 9, so are $4\frac{2}{3}$, $4\frac{3}{4}$, $4\frac{7}{8}$, to $5\frac{1}{4}$, $5\frac{11}{32}$ $5\frac{31}{64}$ respectively.